

## SEQUENCE LISTING

F

&lt;110&gt; OncoMab GmbH et al.

<120> Neoplasm-Specific Polypeptides and Their  
Uses

&lt;130&gt; 50308/009WO3

&lt;150&gt; 10/764,730

&lt;151&gt; 2004-01-26

&lt;160&gt; 30

&lt;170&gt; FastSEQ for Windows Version 4.0

&lt;210&gt; 1

&lt;211&gt; 288

&lt;212&gt; DNA

&lt;213&gt; Mus musculus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)...(288)

&lt;400&gt; 1

tcc tgc aag gct tct ggc tac acc ttc act gac tac tat ata aac tgg	48
Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Tyr Ile Asn Trp	
1 5 10 15	

gtg aag cag agg act gga cag ggc ctt gag tgg att gga gag att tat	96
Val Lys Gln Arg Thr Gly Gln Gly Leu Glu Trp Ile Gly Glu Ile Tyr	
20 25 30	

cct gga agt ggt aat act tac tac aat gag aag ttc aag ggc aag gcc	144
Pro Gly Ser Gly Asn Thr Tyr Tyr Asn Glu Lys Phe Lys Gly Lys Ala	
35 40 45	

aca ctg act gca gac aaa tcc tcc agc aca gcc tac atg cag ctc agc	192
Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser	
50 55 60	

agc ctg aca tct gag gac tct gca gtc tat ttc tgt gca aga tcg gga	240
Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg Ser Gly	
65 70 75 80	

tta cga ccc tat gct atg gac tac tgg ggt caa gga acc tca gtc acc	288
Leu Arg Pro Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr	
85 90 95	

&lt;210&gt; 2

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 2

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Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Tyr Ile Asn Trp
 1           5           10           15
Val Lys Gln Arg Thr Gly Gln Gly Leu Glu Trp Ile Gly Glu Ile Tyr
          20           25           30
Pro Gly Ser Gly Asn Thr Tyr Tyr Asn Glu Lys Phe Lys Gly Lys Ala
      35           40           45
Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser
      50           55           60
Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg Ser Gly
65           70           75           80
Leu Arg Pro Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr
          85           90           95

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&lt;210&gt; 3

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Mus musculus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)...(315)

&lt;400&gt; 3

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cca ctc tcc ctg cct gtc agt ctt gga gat caa gcc tcc atc tct tgc      48
Pro Leu Ser Leu Pro Val Ser Leu Gly Asp Gln Ala Ser Ile Ser Cys
 1           5           10           15

aga tct agt cag agc att gta cat agt aat gga aac acc tat tta gaa      96
Arg Ser Ser Gln Ser Ile Val His Ser Asn Gly Asn Thr Tyr Leu Glu
          20           25           30

tgg tac ctg cag aaa cca ggc cag tct cca aag ctc ctg atc tac aaa      144
Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Lys
          35           40           45

gtt tcc aac cga ttt tct ggg gtc cca gac agg ttc agt ggc agt gga      192
Val Ser Asn Arg Phe Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
      50           55           60

tca ggg aca gat ttc aca ctc aag atc agc aga gtg gag gct gag gat      240
Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp
      65           70           75           80

ctg gga gtt tat tac tgc ttt caa ggt tca cat gtt ccg tac acg ttc      288
Leu Gly Val Tyr Tyr Cys Phe Gln Gly Ser His Val Pro Tyr Thr Phe
          85           90           95

gga ggg ggg acc aag ctg gaa ata aaa      315
Gly Gly Gly Thr Lys Leu Glu Ile Lys
          100           105

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&lt;210&gt; 4

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 4

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Pro Leu Ser Leu Pro Val Ser Leu Gly Asp Gln Ala Ser Ile Ser Cys
 1           5           10           15
Arg Ser Ser Gln Ser Ile Val His Ser Asn Gly Asn Thr Tyr Leu Glu
      20           25           30
Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Lys
      35           40           45
Val Ser Asn Arg Phe Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly
      50           55           60
Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp
      65           70           75           80
Leu Gly Val Tyr Tyr Cys Phe Gln Gly Ser His Val Pro Tyr Thr Phe
      85           90           95
Gly Gly Gly Thr Lys Leu Glu Ile Lys
      100           105

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&lt;210&gt; 5

&lt;211&gt; 3114

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)... (3114)

&lt;400&gt; 5

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gat gtg agg gag cct gaa aat gaa att tct tca gac tgc aat cat ttg      48
Asp Val Arg Glu Pro Glu Asn Glu Ile Ser Ser Asp Cys Asn His Leu
 1           5           10           15

ttg tgg aat tat aag ctg aac cta act aca gat ccc aaa ttt gaa tct      96
Leu Trp Asn Tyr Lys Leu Asn Leu Thr Thr Asp Pro Lys Phe Glu Ser
      20           25           30

gtg gcc aga gag gtt tgc aaa tct act ata aca gag att gaa gaa tgt      144
Val Ala Arg Glu Val Cys Lys Ser Thr Ile Thr Glu Ile Glu Glu Cys
      35           40           45

gct gat gaa ccg gtt gga aaa ggt tac atg gtt tcc tgc ttg gtg gat      192
Ala Asp Glu Pro Val Gly Lys Gly Tyr Met Val Ser Cys Leu Val Asp
      50           55           60

cac cga ggc aac atc act gag tat cag tgt cac cag tac att acc aag      240
His Arg Gly Asn Ile Thr Glu Tyr Gln Cys His Gln Tyr Ile Thr Lys
      65           70           75           80

atg acg gcc atc att ttt agt gat tac cgt tta atc tgt ggc ttc atg      288
Met Thr Ala Ile Ile Phe Ser Asp Tyr Arg Leu Ile Cys Gly Phe Met
      85           90           95

gat gac tgc aaa aat gac atc aac att ctg aaa tgt ggc agt att cgg      336
Asp Asp Cys Lys Asn Asp Ile Asn Ile Leu Lys Cys Gly Ser Ile Arg
      100           105           110

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ctt gga gaa aag gat gca cat tca caa ggt gag gtg gta tca tgc ttg	384
Leu Gly Glu Lys Asp Ala His Ser Gln Gly Glu Val Val Ser Cys Leu	
115 120 125	
gag aaa ggc ctg gtg aaa gaa gca gaa gaa aga gaa ccc aag att caa	432
Glu Lys Gly Leu Val Lys Glu Ala Glu Glu Arg Glu Pro Lys Ile Gln	
130 135 140	
gtt tct gaa ctc tgc aag aaa gcc att ctc cgg gtg gct gag ctg tca	480
Val Ser Glu Leu Cys Lys Lys Ala Ile Leu Arg Val Ala Glu Leu Ser	
145 150 155 160	
tcg gat gac ttt cac tta gac cgg cat tta tat ttt gct tgc cga gat	528
Ser Asp Asp Phe His Leu Asp Arg His Leu Tyr Phe Ala Cys Arg Asp	
165 170 175	
gat cgg gag cgt ttt tgt gaa aat aca caa gct ggt gag ggc aga gtg	576
Asp Arg Glu Arg Phe Cys Glu Asn Thr Gln Ala Gly Glu Gly Arg Val	
180 185 190	
tat aag tgc ctc ttt aac cat aaa ttt gaa gaa tcc atg agt gaa aag	624
Tyr Lys Cys Leu Phe Asn His Lys Phe Glu Glu Ser Met Ser Glu Lys	
195 200 205	
tgt cga gaa gca ctt aca acc cgc caa aag ctg att gcc cag gat tat	672
Cys Arg Glu Ala Leu Thr Thr Arg Gln Lys Leu Ile Ala Gln Asp Tyr	
210 215 220	
aaa gtc agt tat tca ttg gcc aaa tcc tgt aaa agt gac ttg aag aaa	720
Lys Val Ser Tyr Ser Leu Ala Lys Ser Cys Lys Ser Asp Leu Lys Lys	
225 230 235 240	
tac cgg tgc aat gtg gaa aac ctt ccg cga tgc cgt gaa gcc agg ctc	768
Tyr Arg Cys Asn Val Glu Asn Leu Pro Arg Ser Arg Glu Ala Arg Leu	
245 250 255	
tcc tac ttg tta atg tgc ctg gag tca gct gta cac aga ggg cga caa	816
Ser Tyr Leu Leu Met Cys Leu Glu Ser Ala Val His Arg Gly Arg Gln	
260 265 270	
gtc agc agt gag tgc cag ggg gag atg ctg gat tac cga cgc atg ttg	864
Val Ser Ser Glu Cys Gln Gly Glu Met Leu Asp Tyr Arg Arg Met Leu	
275 280 285	
atg gaa gac ttt tct ctg agc cct gag atc atc cta agc tgt cgg ggg	912
Met Glu Asp Phe Ser Leu Ser Pro Glu Ile Ile Leu Ser Cys Arg Gly	
290 295 300	
gag att gaa cac cat tgt tcc gga tta cat cga aaa ggg cgg acc cta	960
Glu Ile Glu His His Cys Ser Gly Leu His Arg Lys Gly Arg Thr Leu	
305 310 315 320	
cac tgt ctg atg aaa gta gtt cga ggg gag aag ggg aac ctt gga atg	1008
His Cys Leu Met Lys Val Val Arg Gly Glu Lys Gly Asn Leu Gly Met	
325 330 335	

aac tgc cag cag gcg ctt caa aca ctg att cag gag act gac cct ggt Asn Cys Gln Gln Ala Leu Gln Thr Leu Ile Gln Glu Thr Asp Pro Gly 340 345 350	1056
gca gat tac cgc att gat cga gct ttg aat gaa gct tgt gaa tct gta Ala Asp Tyr Arg Ile Asp Arg Ala Leu Asn Glu Ala Cys Glu Ser Val 355 360 365	1104
atc cag aca gcc tgc aaa cat ata aga tct gga gac cca atg atc ttg Ile Gln Thr Ala Cys Lys His Ile Arg Ser Gly Asp Pro Met Ile Leu 370 375 380	1152
tgc tgc ctg atg gaa cat tta tac aca gag aag atg gta gaa gac tgt Ser Cys Leu Met Glu His Leu Tyr Thr Glu Lys Met Val Glu Asp Cys 385 390 395 400	1200
gaa cac cgt ctc tta gag ctg cag tat ttc atc tcc cgg gat tgg aag Glu His Arg Leu Leu Glu Leu Gln Tyr Phe Ile Ser Arg Asp Trp Lys 405 410 415	1248
ctg gac cct gtc ctg tac cgc aag tgc cag gga gac gct tct cgt ctt Leu Asp Pro Val Leu Tyr Arg Lys Cys Gln Gly Asp Ala Ser Arg Leu 420 425 430	1296
tgc cac acc cac ggt tgg aat gag acc agc gaa ttt atg cct cag gga Cys His Thr His Gly Trp Asn Glu Thr Ser Glu Phe Met Pro Gln Gly 435 440 445	1344
gct gtg ttc tct tgt tta tac aga cac gcc tac cgc act gag gaa cag Ala Val Phe Ser Cys Leu Tyr Arg His Ala Tyr Arg Thr Glu Glu Gln 450 455 460	1392
gga agg agg ctc tca cgg gag tgc cga gct gaa gtc caa agg atc cta Gly Arg Arg Leu Ser Arg Glu Cys Arg Ala Glu Val Gln Arg Ile Leu 465 470 475 480	1440
cac cag cgt gcc atg gat gtc aag ctg gat cct gcc ctc cag gat aag His Gln Arg Ala Met Asp Val Lys Leu Asp Pro Ala Leu Gln Asp Lys 485 490 495	1488
tgc ctg att gat ctg gga aaa tgg tgc agt gag aaa aca gag act gga Cys Leu Ile Asp Leu Gly Lys Trp Cys Ser Glu Lys Thr Glu Thr Gly 500 505 510	1536
cag aag ctg gag tgc ctt cag gac cat ctg gat gac tta gtg gtg gag Gln Lys Leu Glu Cys Leu Gln Asp His Leu Asp Asp Leu Val Val Glu 515 520 525	1584
tgt aga gat ata gtt ggc aac ctc act gag tta gaa tca gag gat att Cys Arg Asp Ile Val Gly Asn Leu Thr Glu Leu Glu Ser Glu Asp Ile 530 535 540	1632
caa ata gaa gcc ttg ctg atg aga gcc tgt gag ccc ata att cag aac Gln Ile Glu Ala Leu Leu Met Arg Ala Cys Glu Pro Ile Ile Gln Asn 545 550 555 560	1680
ttc tgc cac gat gtg gca gat aac cag ata gac tcc ggg gac ctg atg	1728

Phe	Cys	His	Asp	Val	Ala	Asp	Asn	Gln	Ile	Asp	Ser	Gly	Asp	Leu	Met	
				565					570					575		
gag	tgt	ctg	ata	cag	aac	aaa	cac	cag	aag	gac	atg	aac	gag	aag	tgt	1776
Glu	Cys	Leu	Ile	Gln	Asn	Lys	His	Gln	Lys	Asp	Met	Asn	Glu	Lys	Cys	
		580						585				590				
gcc	atc	gga	gtt	acc	cac	ttc	cag	ctg	gtg	cag	atg	aag	gat	ttt	cgg	1824
Ala	Ile	Gly	Val	Thr	His	Phe	Gln	Leu	Val	Gln	Met	Lys	Asp	Phe	Arg	
		595					600					605				
ttt	tct	tac	aag	ttt	aaa	atg	gcc	tgc	aag	gag	gac	gtg	ttg	aag	ctt	1872
Phe	Ser	Tyr	Lys	Phe	Lys	Met	Ala	Cys	Lys	Glu	Asp	Val	Leu	Lys	Leu	
	610					615					620					
tgc	cca	aac	ata	aaa	aag	aag	gtg	gac	gtg	gtg	atc	tgc	ctg	agc	acg	1920
Cys	Pro	Asn	Ile	Lys	Lys	Lys	Val	Asp	Val	Val	Ile	Cys	Leu	Ser	Thr	
625					630					635					640	
acc	gtg	cgc	aat	gac	act	ctg	cag	gaa	gcc	aag	gag	cac	agg	gtg	tcc	1968
Thr	Val	Arg	Asn	Asp	Thr	Leu	Gln	Glu	Ala	Lys	Glu	His	Arg	Val	Ser	
			645						650					655		
ctg	aag	tgc	cgc	agg	cag	ctc	cgt	gtg	gag	gag	ctg	gag	atg	acg	gag	2016
Leu	Lys	Cys	Arg	Arg	Gln	Leu	Arg	Val	Glu	Glu	Leu	Glu	Met	Thr	Glu	
		660						665					670			
gac	atc	cgc	ttg	gag	cca	gat	cta	tac	gaa	gcc	tgc	aag	agt	gac	atc	2064
Asp	Ile	Arg	Leu	Glu	Pro	Asp	Leu	Tyr	Glu	Ala	Cys	Lys	Ser	Asp	Ile	
		675					680					685				
aaa	aac	ttc	tgt	tcc	gct	gtg	caa	tat	ggc	aac	gct	cag	att	atc	gaa	2112
Lys	Asn	Phe	Cys	Ser	Ala	Val	Gln	Tyr	Gly	Asn	Ala	Gln	Ile	Ile	Glu	
	690						695				700					
tgt	ctg	aaa	gaa	aac	aag	aag	cag	cta	agc	acc	cgc	tgc	cac	caa	aaa	2160
Cys	Leu	Lys	Glu	Asn	Lys	Lys	Gln	Leu	Ser	Thr	Arg	Cys	His	Gln	Lys	
705					710					715					720	
gta	ttt	aag	ctg	cag	gag	aca	gag	atg	atg	gac	cca	gag	cta	gac	tac	2208
Val	Phe	Lys	Leu	Gln	Glu	Thr	Glu	Met	Met	Asp	Pro	Glu	Leu	Asp	Tyr	
			725						730					735		
acc	ctc	atg	agg	gtc	tgc	aag	cag	atg	ata	aag	aag	ttc	tgt	ccg	gaa	2256
Thr	Leu	Met	Arg	Val	Cys	Lys	Gln	Met	Ile	Lys	Lys	Phe	Cys	Pro	Glu	
		740						745					750			
gca	gat	tct	aaa	acc	atg	ttg	cag	tgc	ttg	aag	caa	aat	aaa	aac	agt	2304
Ala	Asp	Ser	Lys	Thr	Met	Leu	Gln	Cys	Leu	Lys	Gln	Asn	Lys	Asn	Ser	
		755					760					765				
gaa	ttg	atg	gat	ccc	aaa	tgc	aaa	cag	atg	ata	acc	aag	cgc	cag	atc	2352
Glu	Leu	Met	Asp	Pro	Lys	Cys	Lys	Gln	Met	Ile	Thr	Lys	Arg	Gln	Ile	
	770					775					780					
acc	cag	aac	aca	gat	tac	cgc	tta	aac	ccc	atg	tta	aga	aaa	gcc	tgt	2400
Thr	Gln	Asn	Thr	Asp	Tyr	Arg	Leu	Asn	Pro	Met	Leu	Arg	Lys	Ala	Cys	

785	790	795	800
aaa gct gac att cct aaa ttc tgt cac ggt atc ctg act aag gcc aag Lys Ala Asp Ile Pro Lys Phe Cys His Gly Ile Leu Thr Lys Ala Lys	2448		
805	810	815	
gat gat tca gaa tta gaa gga caa gtc atc tct tgc ctg aag ctg aga Asp Asp Ser Glu Leu Glu Gly Gln Val Ile Ser Cys Leu Lys Leu Arg	2496		
820	825	830	
tat gct gac cag cgc ctg tct tca gac tgt gaa gac cag atc cga atc Tyr Ala Asp Gln Arg Leu Ser Ser Asp Cys Glu Asp Gln Ile Arg Ile	2544		
835	840	845	
att atc cag gag tcc gcc ctg gac tac cgc ctg gat cct cag ctc cag Ile Ile Gln Glu Ser Ala Leu Asp Tyr Arg Leu Asp Pro Gln Leu Gln	2592		
850	855	860	
ctg cac tgc tca gac gag atc tcc agt cta tgt gct gaa gaa gca gca Leu His Cys Ser Asp Glu Ile Ser Ser Leu Cys Ala Glu Glu Ala Ala	2640		
865	870	875	880
gcc caa gag cag aca ggt cag gtg gag gag tgc ctc aag gtc aac ctg Ala Gln Glu Gln Thr Gly Gln Val Glu Glu Cys Leu Lys Val Asn Leu	2688		
885	890	895	
ctc aag atc aaa aca gaa ttg tgt aaa aag gaa gtg cta aac atg ctg Leu Lys Ile Lys Thr Glu Leu Cys Lys Lys Glu Val Leu Asn Met Leu	2736		
900	905	910	
aag gaa agc aaa gca gac atc ttt gtt gac ccg gta ctt cat act gct Lys Glu Ser Lys Ala Asp Ile Phe Val Asp Pro Val Leu His Thr Ala	2784		
915	920	925	
tgt gcc ctg gac att aaa cac cac tgc gca gcc atc acc cct ggc cgc Cys Ala Leu Asp Ile Lys His His Cys Ala Ala Ile Thr Pro Gly Arg	2832		
930	935	940	
ggg cgt caa atg tcc tgt ctc atg gaa gca ctg gag gat aag cgg gtg Gly Arg Gln Met Ser Cys Leu Met Glu Ala Leu Glu Asp Lys Arg Val	2880		
945	950	955	960
agg tta cag ccc gag tgc aaa aag cgc ctc aat gac cgg att gag atg Arg Leu Gln Pro Glu Cys Lys Lys Arg Leu Asn Asp Arg Ile Glu Met	2928		
965	970	975	
tgg agt tac gca gca aag gtg gcc cca gca gat ggc ttc tct gat ctt Trp Ser Tyr Ala Ala Lys Val Ala Pro Ala Asp Gly Phe Ser Asp Leu	2976		
980	985	990	
gcc atg caa gta atg acg tct cca tct aag aac tac att ctc tct gtg Ala Met Gln Val Met Thr Ser Pro Ser Lys Asn Tyr Ile Leu Ser Val	3024		
995	1000	1005	
atc agt ggg agc atc tgt ata ttg ttc ctg att ggc ctg atg tgt gga Ile Ser Gly Ser Ile Cys Ile Leu Phe Leu Ile Gly Leu Met Cys Gly	3072		
1010	1015	1020	

cgg atc acc aag cga gtg aca cga gag ctc aag gac agg tag  
 Arg Ile Thr Lys Arg Val Thr Arg Glu Leu Lys Asp Arg \*  
 1025 1030 1035

3114

<210> 6  
 <211> 1037  
 <212> PRT  
 <213> Homo sapiens

<400> 6  
 Asp Val Arg Glu Pro Glu Asn Glu Ile Ser Ser Asp Cys Asn His Leu  
 1 5 10 15  
 Leu Trp Asn Tyr Lys Leu Asn Leu Thr Thr Asp Pro Lys Phe Glu Ser  
 20 25 30  
 Val Ala Arg Glu Val Cys Lys Ser Thr Ile Thr Glu Ile Glu Glu Cys  
 35 40 45  
 Ala Asp Glu Pro Val Gly Lys Gly Tyr Met Val Ser Cys Leu Val Asp  
 50 55 60  
 His Arg Gly Asn Ile Thr Glu Tyr Gln Cys His Gln Tyr Ile Thr Lys  
 65 70 75 80  
 Met Thr Ala Ile Ile Phe Ser Asp Tyr Arg Leu Ile Cys Gly Phe Met  
 85 90 95  
 Asp Asp Cys Lys Asn Asp Ile Asn Ile Leu Lys Cys Gly Ser Ile Arg  
 100 105 110  
 Leu Gly Glu Lys Asp Ala His Ser Gln Gly Glu Val Val Ser Cys Leu  
 115 120 125  
 Glu Lys Gly Leu Val Lys Glu Ala Glu Glu Arg Glu Pro Lys Ile Gln  
 130 135 140  
 Val Ser Glu Leu Cys Lys Lys Ala Ile Leu Arg Val Ala Glu Leu Ser  
 145 150 155 160  
 Ser Asp Asp Phe His Leu Asp Arg His Leu Tyr Phe Ala Cys Arg Asp  
 165 170 175  
 Asp Arg Glu Arg Phe Cys Glu Asn Thr Gln Ala Gly Glu Gly Arg Val  
 180 185 190  
 Tyr Lys Cys Leu Phe Asn His Lys Phe Glu Glu Ser Met Ser Glu Lys  
 195 200 205  
 Cys Arg Glu Ala Leu Thr Thr Arg Gln Lys Leu Ile Ala Gln Asp Tyr  
 210 215 220  
 Lys Val Ser Tyr Ser Leu Ala Lys Ser Cys Lys Ser Asp Leu Lys Lys  
 225 230 235 240  
 Tyr Arg Cys Asn Val Glu Asn Leu Pro Arg Ser Arg Glu Ala Arg Leu  
 245 250 255  
 Ser Tyr Leu Leu Met Cys Leu Glu Ser Ala Val His Arg Gly Arg Gln  
 260 265 270  
 Val Ser Ser Glu Cys Gln Gly Glu Met Leu Asp Tyr Arg Arg Met Leu  
 275 280 285  
 Met Glu Asp Phe Ser Leu Ser Pro Glu Ile Ile Leu Ser Cys Arg Gly  
 290 295 300  
 Glu Ile Glu His His Cys Ser Gly Leu His Arg Lys Gly Arg Thr Leu  
 305 310 315 320  
 His Cys Leu Met Lys Val Val Arg Gly Glu Lys Gly Asn Leu Gly Met  
 325 330 335  
 Asn Cys Gln Gln Ala Leu Gln Thr Leu Ile Gln Glu Thr Asp Pro Gly  
 340 345 350



Ala Asp Tyr Arg Ile Asp Arg Ala Leu Asn Glu Ala Cys Glu Ser Val  
 355 360 365  
 Ile Gln Thr Ala Cys Lys His Ile Arg Ser Gly Asp Pro Met Ile Leu  
 370 375 380  
 Ser Cys Leu Met Glu His Leu Tyr Thr Glu Lys Met Val Glu Asp Cys  
 385 390 395 400  
 Glu His Arg Leu Leu Glu Leu Gln Tyr Phe Ile Ser Arg Asp Trp Lys  
 405 410 415  
 Leu Asp Pro Val Leu Tyr Arg Lys Cys Gln Gly Asp Ala Ser Arg Leu  
 420 425 430  
 Cys His Thr His Gly Trp Asn Glu Thr Ser Glu Phe Met Pro Gln Gly  
 435 440 445  
 Ala Val Phe Ser Cys Leu Tyr Arg His Ala Tyr Arg Thr Glu Glu Gln  
 450 455 460  
 Gly Arg Arg Leu Ser Arg Glu Cys Arg Ala Glu Val Gln Arg Ile Leu  
 465 470 475 480  
 His Gln Arg Ala Met Asp Val Lys Leu Asp Pro Ala Leu Gln Asp Lys  
 485 490 495  
 Cys Leu Ile Asp Leu Gly Lys Trp Cys Ser Glu Lys Thr Glu Thr Gly  
 500 505 510  
 Gln Lys Leu Glu Cys Leu Gln Asp His Leu Asp Asp Leu Val Val Glu  
 515 520 525  
 Cys Arg Asp Ile Val Gly Asn Leu Thr Glu Leu Glu Ser Glu Asp Ile  
 530 535 540  
 Gln Ile Glu Ala Leu Leu Met Arg Ala Cys Glu Pro Ile Ile Gln Asn  
 545 550 555 560  
 Phe Cys His Asp Val Ala Asp Asn Gln Ile Asp Ser Gly Asp Leu Met  
 565 570 575  
 Glu Cys Leu Ile Gln Asn Lys His Gln Lys Asp Met Asn Glu Lys Cys  
 580 585 590  
 Ala Ile Gly Val Thr His Phe Gln Leu Val Gln Met Lys Asp Phe Arg  
 595 600 605  
 Phe Ser Tyr Lys Phe Lys Met Ala Cys Lys Glu Asp Val Leu Lys Leu  
 610 615 620  
 Cys Pro Asn Ile Lys Lys Lys Val Asp Val Val Ile Cys Leu Ser Thr  
 625 630 635 640  
 Thr Val Arg Asn Asp Thr Leu Gln Glu Ala Lys Glu His Arg Val Ser  
 645 650 655  
 Leu Lys Cys Arg Arg Gln Leu Arg Val Glu Glu Leu Glu Met Thr Glu  
 660 665 670  
 Asp Ile Arg Leu Glu Pro Asp Leu Tyr Glu Ala Cys Lys Ser Asp Ile  
 675 680 685  
 Lys Asn Phe Cys Ser Ala Val Gln Tyr Gly Asn Ala Gln Ile Ile Glu  
 690 695 700  
 Cys Leu Lys Glu Asn Lys Lys Gln Leu Ser Thr Arg Cys His Gln Lys  
 705 710 715 720  
 Val Phe Lys Leu Gln Glu Thr Glu Met Met Asp Pro Glu Leu Asp Tyr  
 725 730 735  
 Thr Leu Met Arg Val Cys Lys Gln Met Ile Lys Lys Phe Cys Pro Glu  
 740 745 750  
 Ala Asp Ser Lys Thr Met Leu Gln Cys Leu Lys Gln Asn Lys Asn Ser  
 755 760 765  
 Glu Leu Met Asp Pro Lys Cys Lys Gln Met Ile Thr Lys Arg Gln Ile  
 770 775 780  
 Thr Gln Asn Thr Asp Tyr Arg Leu Asn Pro Met Leu Arg Lys Ala Cys  
 785 790 795 800  
 Lys Ala Asp Ile Pro Lys Phe Cys His Gly Ile Leu Thr Lys Ala Lys

**10/21**

805										810				815			
Asp	Asp	Ser	Glu	Leu	Glu	Gly	Gln	Val	Ile	Ser	Cys	Leu	Lys	Leu	Arg		
820										825				830			
Tyr	Ala	Asp	Gln	Arg	Leu	Ser	Ser	Asp	Cys	Glu	Asp	Gln	Ile	Arg	Ile		
835										840				845			
Ile	Ile	Gln	Glu	Ser	Ala	Leu	Asp	Tyr	Arg	Leu	Asp	Pro	Gln	Leu	Gln		
850										855				860			
Leu	His	Cys	Ser	Asp	Glu	Ile	Ser	Ser	Leu	Cys	Ala	Glu	Glu	Ala	Ala		
865										870				875			
Ala	Gln	Glu	Gln	Thr	Gly	Gln	Val	Glu	Glu	Cys	Leu	Lys	Val	Asn	Leu		
885										890				895			
Leu	Lys	Ile	Lys	Thr	Glu	Leu	Cys	Lys	Lys	Glu	Val	Leu	Asn	Met	Leu		
900										905				910			
Lys	Glu	Ser	Lys	Ala	Asp	Ile	Phe	Val	Asp	Pro	Val	Leu	His	Thr	Ala		
915										920				925			
Cys	Ala	Leu	Asp	Ile	Lys	His	His	Cys	Ala	Ala	Ile	Thr	Pro	Gly	Arg		
930										935				940			
Gly	Arg	Gln	Met	Ser	Cys	Leu	Met	Glu	Ala	Leu	Glu	Asp	Lys	Arg	Val		
945										950				955			
Arg	Leu	Gln	Pro	Glu	Cys	Lys	Lys	Arg	Leu	Asn	Asp	Arg	Ile	Glu	Met		
965										970				975			
Trp	Ser	Tyr	Ala	Ala	Lys	Val	Ala	Pro	Ala	Asp	Gly	Phe	Ser	Asp	Leu		
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Ala	Met	Gln	Val	Met	Thr	Ser	Pro	Ser	Lys	Asn	Tyr	Ile	Leu	Ser	Val		
995										1000				1005			
Ile	Ser	Gly	Ser	Ile	Cys	Ile	Leu	Phe	Leu	Ile	Gly	Leu	Met	Cys	Gly		
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		20						25					30			
Arg	Ala	Ser	His	Ser	Gln	Gly	Gln	Gly	Pro	Gly	Ala	Asn	Phe	Val	Ser	
		35					40					45				
Phe	Val	Gly	Gln	Ala	Gly	Gly	Gly	Gly	Pro	Ala	Gly	Gln	Gln	Leu	Pro	
	50					55					60					
Gln	Leu	Pro	Gln	Ser	Ser	Gln	Leu	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	
65						70				75					80	
Gln	Gln	Gln	Gln	Pro	Gln	Pro	Pro	Gln	Pro	Pro	Phe	Pro	Ala	Gly	Gly	
				85					90					95		
Pro	Pro	Arg	Arg	Gly	Gly	Ala	Gly	Ala	Gly	Gly	Gly	Trp	Lys	Leu	Ala	
			100					105					110			
Glu	Glu	Glu	Ser	Cys	Arg	Glu	Asp	Val	Thr	Arg	Val	Cys	Pro	Lys	His	
		115					120					125				
Thr	Trp	Ser	Asn	Asn	Leu	Ala	Val	Leu	Glu	Cys	Leu	Gln	Asp	Val	Arg	
	130					135					140					
Glu	Pro	Glu	Asn	Glu	Ile	Ser	Ser	Asp	Cys	Asn	His	Leu	Leu	Trp	Asn	
145					150					155					160	

Tyr Lys Leu Asn Leu Thr Thr Asp Pro Lys Phe Glu Ser Val Ala Arg  
 165 170 175  
 Glu Val Cys Lys Ser Thr Ile Thr Glu Ile Lys Glu Cys Ala Asp Glu  
 180 185 190  
 Pro Val Gly Lys Gly Tyr Met Val Ser Cys Leu Val Asp His Arg Gly  
 195 200 205  
 Asn Ile Thr Glu Tyr Gln Cys His Gln Tyr Ile Thr Lys Met Thr Ala  
 210 215 220  
 Ile Ile Phe Ser Asp Tyr Arg Leu Ile Cys Gly Phe Met Asp Asp Cys  
 225 230 235 240  
 Lys Asn Asp Ile Asn Ile Leu Lys Cys Gly Ser Ile Arg Leu Gly Glu  
 245 250 255  
 Lys Asp Ala His Ser Gln Gly Glu Val Val Ser Cys Leu Glu Lys Gly  
 260 265 270  
 Leu Val Lys Glu Ala Glu Glu Arg Glu Pro Lys Ile Gln Val Ser Glu  
 275 280 285  
 Leu Cys Lys Lys Ala Ile Leu Arg Val Ala Glu Leu Ser Ser Asp Asp  
 290 295 300  
 Phe His Leu Asp Arg His Leu Tyr Phe Ala Cys Arg Asp Asp Arg Glu  
 305 310 315 320  
 Arg Phe Cys Glu Asn Thr Gln Ala Cys Glu Gly Arg Val Tyr Lys Cys  
 325 330 335  
 Leu Phe Asn His Lys Phe Glu Glu Ser Met Ser Glu Lys Cys Arg Glu  
 340 345 350  
 Ala Leu Thr Thr Arg Gln Lys Leu Ile Ala Gln Asp Tyr Lys Val Ser  
 355 360 365  
 Tyr Ser Leu Ala Lys Ser Cys Lys Ser Asp Leu Lys Lys Tyr Arg Cys  
 370 375 380  
 Asn Val Glu Asn Leu Pro Arg Ser Arg Glu Ala Arg Leu Ser Tyr Leu  
 385 390 395 400  
 Leu Met Cys Leu Glu Ser Ala Val His Arg Gly Arg Gln Val Ser Ser  
 405 410 415  
 Glu Cys Gln Gly Glu Met Leu Asp Tyr Arg Arg Met Leu Met Glu Asp  
 420 425 430  
 Phe Ser Leu Ser Pro Glu Ile Ile Leu Ser Cys Arg Gly Glu Ile Glu  
 435 440 445  
 His His Cys Ser Gly Leu His Arg Lys Gly Arg Thr Leu His Cys Leu  
 450 455 460  
 Met Lys Val Val Arg Gly Glu Lys Cys Asn Leu Gly Met Asn Cys Gln  
 465 470 475 480  
 Gln Ala Leu Gln Thr Leu Ile Gln Glu Thr Asp Pro Gly Ala Asp Tyr  
 485 490 495  
 Arg Ile Asp Arg Ala Leu Asn Glu Ala Cys Glu Ser Val Ile Gln Thr  
 500 505 510  
 Ala Cys Lys His Ile Arg Ser Gly Asp Pro Met Ile Ser Ser Cys Leu  
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 Met Glu His Leu Tyr Thr Glu Lys Met Val Glu Asp Cys Glu His Arg  
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 Leu Leu Glu Leu Gln Tyr Phe Ile Ser Arg Asp Trp Lys Leu Asp Pro  
 545 550 555 560  
 Val Leu Tyr Arg Lys Cys Gln Gly Asp Ala Ser Arg Leu Cys His Thr  
 565 570 575  
 His Gly Trp Asn Glu Thr Ser Glu Phe Met Pro Gln Gly Ala Val Phe  
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 Ser Cys Leu Tyr Arg Glu Ala Tyr Arg Thr Glu Glu Gln Gly Arg Arg  
 595 600 605  
 Leu Ser Arg Glu Cys Arg Ala Glu Val Gln Arg Ile Leu His Gln Arg

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610	615	620
Ala Met Asp Val Lys Leu Asp Pro Ala Leu Gln Asp Lys Cys Leu Ile		
625	630	635
Asp Leu Gly Lys Trp Cys Ser Glu Lys Thr Glu Thr Gly Gln Glu Leu		640
	645	650
Glu Cys Leu Gln Asp His Leu Asp Asp Leu Val Val Glu Cys Arg Asp		655
	660	665
Ile Val Gly Asn Leu Thr Glu Leu Glu Ser Glu Asp Ile Gln Ile Glu		670
	675	680
Ala Leu Leu Met Arg Ala Cys Glu Pro Ile Ile Gln Thr Phe Cys His		685
	690	695
Asp Ala Asp Asn Gln Ile Asp Ser Gly Asp Leu Met Glu Cys Leu Ile		700
705	710	715
Gln Asn Lys His Gln Lys Asp Met Asn Glu Lys Cys Ala Ile Gly Val		720
	725	730
Thr His Phe Gln Leu Val Gln Met Lys Asp Phe Arg Phe Ser Tyr Lys		735
	740	745
Phe Lys Met Ala Cys Lys Glu Asp Val Leu Lys Leu Cys Pro Asn Ile		750
	755	760
Lys Lys Lys Val Asp Val Val Ile Cys Leu Ser Thr Thr Val Arg Asn		765
	770	775
Asp Thr Leu Gln Glu Ala Lys Glu His Arg Val Ser Leu Lys Cys Arg		780
785	790	795
Arg Gln Leu Arg Val Glu Glu Leu Glu Met Thr Glu Asp Ile Arg Leu		800
	805	810
Glu Pro Asp Leu Tyr Glu Ala Cys Lys Ser Asp Ile Lys Asn Phe Cys		815
	820	825
Ser Ala Val Gln Tyr Gly Asn Ala Gln Ile Ile Glu Cys Leu Lys Glu		830
	835	840
Asn Lys Lys Gln Leu Ser Thr Arg Cys His Gln Lys Val Phe Lys Leu		845
	850	855
Gln Glu Thr Glu Met Met Asp Pro Glu Leu Asp Tyr Thr Leu Met Arg		860
865	870	875
Val Cys Lys Gln Met Ile Lys Arg Phe Cys Pro Glu Ala Asp Ser Lys		880
	885	890
Thr Met Leu Gln Cys Leu Lys Gln Asn Lys Asn Ser Glu Leu Met Asp		895
	900	905
Pro Lys Cys Lys Gln Met Ile Thr Lys Arg Gln Ile Thr Gln Asn Thr		910
	915	920
Asp Tyr Arg Leu Asn Pro Met Leu Arg Lys Ala Cys Lys Ala Asp Ile		925
	930	935
Pro Lys Phe Cys His Gly Ile Leu Thr Lys Ala Lys Asp Asp Ser Glu		940
945	950	955
Leu Glu Gly Gln Val Ile Ser Cys Leu Lys Leu Arg Tyr Ala Asp Gln		960
	965	970
Arg Leu Ser Ser Asp Cys Glu Asp Gln Ile Arg Ile Ile Ile Gln Glu		975
	980	985
Ser Ala Leu Asp Tyr Arg Leu Asp Pro Gln Leu Gln Leu His Cys Ser		990
	995	1000
Asp Glu Ile Ser Ser Leu Cys Ala Glu Glu Ala Ala Ala Gln Glu Gln		1005
	1010	1015
Thr Gly Gln Val Glu Glu Cys Leu Lys Val Asn Leu Leu Lys Ile Lys		1020
1025	1030	1035
Thr Glu Leu Cys Lys Lys Glu Val Leu Asn Met Leu Lys Glu Ser Lys		1040
	1045	1050
Ala Asp Ile Phe Val Asp Pro Val Leu His Thr Ala Cys Ala Leu Asp		1055
	1060	1065
		1070

Ile Lys His His Cys Ala Ala Leu Thr Pro Gly Arg Gly Arg Gln Met  
 1075 1080 1085  
 Ser Cys Leu Met Glu Ala Leu Glu Asp Lys Arg Val Arg Leu Gln Pro  
 1090 1095 1100  
 Glu Cys Lys Lys Arg Leu Asn Asp Arg Ile Glu Met Trp Ser Tyr Ala  
 1105 1110 1115 1120  
 Ala Lys Val Ala Pro Ala Asp Gly Phe Ser Asp Leu Ala Met Gln Val  
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 Met Thr Ser Pro Ser Lys Asn Tyr Ile Leu Ser Val Ile Ser Gly Ser  
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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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 His Gly Val His Ser Gln Gly Gln Gly Pro Gly Ala Asn Phe Val Ser  
 35 40 45  
 Phe Val Gly Gln Ala Gly Gly Gly Gly Pro Ala Gly Gln Gln Leu Pro  
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 Gln Leu Leu Gln Ser Ser Gln Leu Gln Gln Gln Gln Gln Gln  
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 Gln Gln Gln Gln Leu Gln Pro Pro Gln Pro Phe Pro Ala Gly Gly  
 85 90 95  
 Pro Pro Ala Arg Arg Gly Gly Ala Gly Ala Gly Gly Gly Trp Lys Leu  
 100 105 110  
 Ala Glu Glu Glu Ser Cys Arg Glu Asp Val Thr Arg Val Cys Pro Lys  
 115 120 125  
 His Thr Trp Ser Asn Asn Leu Ala Val Leu Glu Cys Leu Gln Asp Val  
 130 135 140  
 Arg Glu Pro Glu Asn Glu Ile Ser Ser Asp Cys Asn His Leu Leu Trp  
 145 150 155 160  
 Asn Tyr Lys Leu Asn Leu Thr Thr Asp Pro Lys Phe Glu Ser Val Ala  
 165 170 175  
 Arg Glu Val Cys Lys Ser Thr Ile Thr Glu Ile Lys Glu Cys Ala Asp  
 180 185 190  
 Glu Pro Val Gly Lys Gly Tyr Met Val Ser Cys Leu Val Asp His Arg  
 195 200 205  
 Gly Asn Ile Thr Glu Tyr Gln Cys His Gln Tyr Ile Thr Lys Met Thr  
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 Ala Ile Ile Phe Ser Asp Tyr Arg Leu Ile Cys Gly Phe Met Asp Asp  
 225 230 235 240  
 Cys Lys Asn Asp Ile Asn Ile Leu Lys Cys Gly Ser Ile Arg Leu Gly  
 245 250 255  
 Glu Lys Asp Ala His Ser Gln Gly Glu Val Val Ser Cys Leu Glu Lys  
 260 265 270  
 Gly Leu Val Lys Glu Ala Glu Glu Arg Glu Pro Lys Ile Gln Val Ser

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Glu	Leu	Cys	Lys	Lys	Ala	Ile	Leu	Arg	Val	Ala	Glu	Leu	Ser	Ser	Asp
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Asp	Phe	His	Leu	Asp	Arg	His	Leu	Tyr	Phe	Ala	Cys	Arg	Asp	Asp	Arg
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Glu	Arg	Phe	Cys	Glu	Asn	Thr	Gln	Ala	Arg	Glu	Gly	Arg	Val	Tyr	Lys
325				330				335							
Cys	Leu	Phe	Asn	His	Lys	Phe	Glu	Glu	Ser	Met	Ser	Glu	Lys	Cys	Arg
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Glu	Ala	Leu	Thr	Thr	Arg	Gln	Lys	Leu	Ile	Ala	Gln	Asp	Tyr	Lys	Val
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Ser	Tyr	Ser	Leu	Ala	Lys	Ser	Cys	Lys	Ser	Asp	Leu	Lys	Lys	Tyr	Arg
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Cys	Asn	Val	Glu	Asn	Leu	Pro	Arg	Ser	Arg	Glu	Ala	Arg	Leu	Ser	Tyr
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Leu	Leu	Met	Cys	Leu	Glu	Ser	Ala	Val	His	Arg	Gly	Arg	Gln	Val	Ser
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Ser	Glu	Cys	Gln	Gly	Glu	Met	Leu	Asp	Tyr	Arg	Arg	Met	Leu	Met	Glu
420				425				430							
Asp	Phe	Ser	Leu	Ser	Pro	Glu	Ile	Ile	Leu	Ser	Cys	Arg	Gly	Glu	Ile
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Glu	His	His	Cys	Ser	Gly	Leu	His	Arg	Lys	Gly	Arg	Thr	Leu	His	Cys
450				455				460							
Leu	Met	Lys	Val	Val	Arg	Gly	Glu	Lys	Gly	Asn	Leu	Gly	Met	Asn	Cys
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Tyr	Arg	Ile	Asp	Arg	Ala	Leu	Asn	Glu	Ala	Cys	Glu	Ser	Val	Ile	Gln
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Thr	Ala	Cys	Lys	His	Ile	Arg	Ser	Gly	Asp	Pro	Met	Ile	Leu	Ser	Cys
515				520				525							
Leu	Met	Glu	His	Leu	Tyr	Thr	Glu	Lys	Met	Val	Glu	Asp	Cys	Glu	His
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Arg	Leu	Leu	Glu	Leu	Gln	Tyr	Phe	Ile	Ser	Arg	Asp	Trp	Lys	Leu	Asp
545				550				555			560				
Pro	Val	Leu	Tyr	Arg	Lys	Cys	Gln	Gly	Asp	Ala	Ser	Arg	Leu	Cys	His
565				570				575							
Thr	His	Gly	Trp	Asn	Glu	Thr	Ser	Glu	Phe	Met	Pro	Gln	Gly	Ala	Val
580				585				590							
Phe	Ser	Cys	Leu	Tyr	Arg	His	Ala	Tyr	Arg	Thr	Glu	Glu	Gln	Gly	Arg
595				600				605							
Arg	Leu	Leu	Asp	Pro	Ala	Leu	Gln	Asp	Lys	Cys	Leu	Ile	Asp	Leu	Gly
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Met	Asp	Val	Lys	Gln	Asp	His	Leu	Asp	Asp	Leu	Val	Val	Glu	Cys	Arg
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Glu	Ala	Leu	Leu	Met	Arg	Ala	Cys	Glu	Pro	Ile	Ile	Gln	Asn	Phe	Cys
690				695				700							
His	Asp	Val	Ala	Asp	Asn	Gln	Ile	Asp	Ser	Gly	Asp	Leu	Met	Glu	Cys
705				710				715			720				
Leu	Ile	Gln	Asn	Lys	His	Gln	Lys	Asp	Met	Asn	Glu	Lys	Cys	Ala	Ile
725				730				735							

Gly Val Thr His Phe Gln Leu Val Gln Met Lys Asp Phe Arg Phe Ser  
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 Tyr Lys Phe Lys Met Ala Cys Lys Glu Asp Val Leu Lys Leu Cys Pro  
 755 760 765  
 Asn Ile Lys Lys Lys Val Asp Val Val Ile Cys Leu Ser Thr Thr Val  
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 Arg Asn Asp Thr Leu Gln Glu Ala Lys Glu His Arg Val Ser Leu Lys  
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 Cys Arg Arg Gln Leu Arg Val Glu Glu Leu Glu Met Thr Glu Asp Ile  
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 Arg Leu Glu Pro Asp Leu Tyr Glu Ala Cys Lys Ser Asp Ile Lys Asn  
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 Phe Cys Ser Ala Val Gln Tyr Gly Asn Ala Gln Ile Ile Glu Cys Leu  
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 Asn Thr Asp Tyr Arg Leu Asn Pro Met Leu Arg Lys Ala Cys Lys Ala  
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 945 950 955 960  
 Ser Glu Leu Glu Gly Gln Val Ile Ser Cys Leu Lys Leu Arg Tyr Ala  
 965 970 975  
 Asp Gln Arg Leu Ser Ser Asp Cys Glu Asp Gln Ile Arg Ile Ile Ile  
 980 985 990  
 Gln Glu Ser Ala Leu Asp Tyr Arg Leu Asp Pro Gln Leu Gln Leu His  
 995 1000 1005  
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 Ile Lys Thr Glu Leu Cys Lys Lys Glu Val Leu Asn Met Leu Lys Glu  
 1045 1050 1055  
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 1060 1065 1070  
 Leu Asp Ile Lys His His Cys Ala Ala Ile Thr Pro Gly Arg Gly Arg  
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 Gln Met Ser Cys Leu Met Glu Ala Leu Glu Asp Lys Arg Val Arg Leu  
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 Gln Pro Glu Cys Lys Lys Arg Leu Asn Asp Arg Ile Glu Met Trp Ser  
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 Gln Val Met Thr Ser Pro Ser Lys Asn Tyr Ile Leu Ser Val Ile Ser  
 1140 1145 1150  
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Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp	
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Val Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser  
35 40 45

gtg aag ggc cga ttc acc atc tcc aga gac aat tcc aag aac acg ctg 192  
Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu  
50 55 60

tat	ctg	caa	atg	aac	agc	ctg	aga	gct	gag	gac	acg	gct	gtg	tat	tac	240
Tyr	Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Val	Tyr	Tyr	
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Cys	Ala	Arg	Ser	Thr	Thr	Arg	Ser	Tyr	Pro	Leu	Tyr	Gly	Met	Asp	Val		
				85					90					95			

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 Gly Gln Thr Ala Ser Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Lys  
 20 25 30  
 agt gtg cac tgg tac cat cag aag cca ggc cag gcc cct gtg ctg gtc 144  
 Ser Val His Trp Tyr His Gln Lys Pro Gly Gln Ala Pro Val Leu Val  
 35 40 45  
 gtc tat gat gat agc gac cgg ccc tca ggg atc cct gag cga ttc tct 192  
 Val Tyr Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser  
 50 55 60  
 ggc tcc aac tct ggg aac acg gcc acc ctg acc atc acc agg gtc gaa 240  
 Gly Ser Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Thr Arg Val Glu  
 65 70 75 80  
 gcc ggg gat gag gcc gac tat tac tgt cag gtg tgg gat agt agt agt 288  
 Ala Gly Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Ser Ser Ser  
 85 90 95  
 gat ctc aat tgg gtg ttc ggc gga agg acc caa gct gac cgt cct acg 336  
 Asp Leu Asn Trp Val Phe Gly Gly Arg Thr Gln Ala Asp Arg Pro Thr  
 100 105 110  
 tca gcc caa ggc tgc ccc tcc ggt cac tct gtt ccc cgc ccc cct ctg 384  
 Ser Ala Gln Gly Cys Pro Ser Gly His Ser Val Pro Arg Pro Pro Leu  
 115 120 125  
 aag agc ttc aag ctt 399  
 Lys Ser Phe Lys Leu  
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 <212> PRT  
 <213> Homo sapiens

<400> 28  
 Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser  
 1 5 10 15  
 Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp

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      20      25      30
Val Ala Val Ile Ser Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser
      35      40      45
Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu
      50      55      60
Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr
      65      70      75      80
Cys Ala Arg Ser Thr Arg Ser Tyr Pro Leu Tyr Gly Met Asp Val
      85      90      95
Trp Gly Gln Gly Asn Pro Val Thr
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 <213> Homo sapiens

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Gly Gln Thr Ala Ser Ile Thr Cys Gly Gly Asn Asn Ile Gly Ser Lys
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Ser Val His Trp Tyr His Gln Lys Pro Gly Gln Ala Pro Val Leu Val
      35      40      45
Val Tyr Asp Asp Ser Asp Arg Pro Ser Gly Ile Pro Glu Arg Phe Ser
      50      55      60
Gly Ser Asn Ser Gly Asn Thr Ala Thr Leu Thr Ile Thr Arg Val Glu
      65      70      75      80
Ala Gly Asp Glu Ala Asp Tyr Tyr Cys Gln Val Trp Asp Ser Ser Ser
      85      90      95
Asp Leu Asn Trp Val Phe Gly Gly Arg Thr Gln Ala Asp Arg Pro Thr
      100      105      110
Ser Ala Gln Gly Cys Pro Ser Gly His Ser Val Pro Arg Pro Pro Leu
      115      120      125
Lys Ser Phe Lys Leu
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22